

## REMARKS

Claims 1 through 24 were pending in the subject application. Claims 1, 6 and 18-21 have been amended. Claim 25 has been added. Therefore claims 1-25 are now pending.

Claim 1 has been amended to better define the claimed invention. Support for the amendment is found in the specification in paragraph [0012] and in claims 9-13 as filed. In addition, claims 1 and 18-21 have been amended to correct a typographical omission. Support for the amendment is found in the specification in paragraphs [0006] and [0007]. Claim 6 has been amended and claim 25 added to more clearly claim the subject matter of original claim 6. Support is found in the specification in paragraph [0011] and in claim 6 as originally filed. No issue of new matter is raised.

### The Invention

The claims are directed to methods for preparing a quinacridonequinone from quinacridone precursors by oxidizing the precursor with persulfuric acids, salts, or derivatives in a liquid medium, and to the highly pure quinacridonequinones produced by this method.

### 35 U.S.C. §112 Rejections

Claims 1-24 have been rejected under §112, second paragraph, as allegedly indefinite because the definition of R includes unsubstituted phenyl in the product quinacridonequinone of claim 1 and 24 but not in the intermediate quinacridones of claims 1, 18-21, and 24. The claims have been amended to add unsubstituted phenyl to the definition of R for the intermediate quinacridones so as to provide the actual process. This amendment corrects a clear typographical omission, since the process is incomplete otherwise. The complete process is shown in the specification in paragraphs [0006] and [0007], where the R group of the relevant quinacridone intermediates *is* defined to include unsubstituted phenyl.

The phrase “such as” in claim 6 is considered indefinite. Claim 6 has been amended to clarify the claim language.

Claim 24 is also considered indefinite because it is alleged that the *means* for purity improvement of claim 24 is not clear. However, it is not necessary to include mechanisms in the claims. As stated in the specification in paragraph [0019], the purity of quinacridonequinones prepared by the claimed method is between 90% and 98%. This is considered a higher purity than that obtained by prior art methods.

Based on all the foregoing, the Examiner is respectfully requested to withdraw the §112, second paragraph, rejections.

### 35 U.S.C. § 102(b) Rejections

#### *Jaffe (U.S. Patent No. 3,251,845)*

Claims 1-8, 15, 16, 19, and 22-24 have been rejected under §102(b) over Jaffe, which discloses a process for oxidizing dihydroquinacridone to quinacridonequinone. This rejection is respectfully traversed.

The claimed process uses an oxidant that is not disclosed by Jaffe. The oxidants disclosed by Jaffe are chromate, permanganate, and dilute nitric acid (at temperatures of 150°C or above (column 2 lines 1-2 and 22)). In contrast, the claimed process requires the use of persulfuric acids, salts, or derivatives. Since the claimed process uses different oxidants, Jaffe does not anticipate the process of claims 1-8, 15, 16, 19, and 24.

With regard to claims 22 and 23, the quinacridonequinones of these claims are distinguished from the prior art quinacridonequinones by their higher purity (see for example lines 25-28 of paragraph [0003] of the specification).

Based on the foregoing, it is respectfully requested that the rejection be withdrawn.

#### *Funakura (JP 11-246784)*

Claims 1-24 have been rejected under §102(b) over Funakura, which discloses a process for oxidizing a 6,13-dihydroquinacridone or a quinacridone to a quinacridonequinone. This rejection is respectfully traversed.

Funakura does not disclose persulfuric acids, salts, or derivatives added to quinacridones as oxidants. Since the claimed process uses these oxidants, Funakura does not anticipate the process of claims 1-21 and 24.

In addition, Funakura does not disclose water as a medium as in claim 7, or the quinacridone intermediates of claims 20 and 21.

Further, the Funakura process requires use of a nonpolar, organic solvent system in which the intermediate is soluble and the final product is insoluble. The claimed process does require such a solvent system.

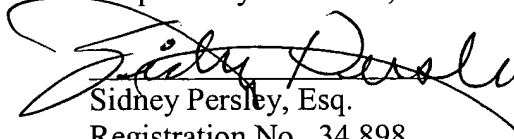
With regard to claims 22 and 23, the quinacridonequinones of these claims may be distinguished from the prior art quinacridonequinones by their high purity.

Based on the foregoing, it is respectfully requested that the rejection be withdrawn.

#### CONCLUSION

Applicants believe that the amendments and the remarks provided herein adequately and completely address the Examiner's rejections. It is therefore respectfully submitted that the amended claims are in condition for allowance.

Respectfully submitted,



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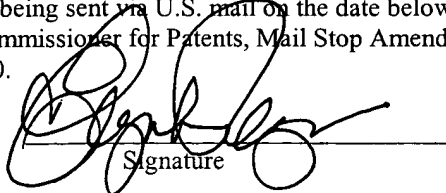
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